REMARKS

After entry of this Amendment, claims 1 and 3 - 9 will be all the claims pending in the application. Claims 1 and 7 have been amended. Claim 2 has been canceled. Claims 8 and 9 are new.

Support for the amendment to claims 1 and 7 and new claim 8 may be found in the specification, e.g., at the paragraph bridging pages 5 and 6, which states that:

> The weight average molecular weight of difunctional urethane (meth) acrylate is preferably in the range of 3,000 to 20,000, more preferably in the range of 5,000 to 15,000. The content of difunctional urethane (meth) acrylate is preferably 80 or more percents by mass, more preferably 90 or more percents by mass, and most preferably 95 or more percents by mass against to the total amount of difunctional urethane (meth) acrylate and other polymerizable compounds.

That is, the weight average molecular weight of 5,000 is a lower limited value of the more preferable range. The weight average molecular weight of 20,000 is an upper limited value of the preferable range. The content of difunctional urethane (meth) acrylate of 80 percent or more is a preferable range. Accordingly, the amended claim 1 is a preferable range of the present invention. Further, in the examples of the present specification, the weight average molecular weights of difunctional urethane (meth) acrylate are 8,000 and 14,000. Accordingly, the amendment to claim 7 is supported by the specification.

Support for new claim 9 may be found in the specification, e.g., at page 9, lines 10-20.

The pressure sensitive adhesive sheets of the present invention are superior in bending resistance property and superior transparency, and can give excellent scratch resistance, can be reduced in distortion, and can achieve an improved definition of an image.

No new matter has been added.

Entry of the above amendments is respectfully requested.

Preliminary Matters

Applicants thank the Examiner for withdrawing the rejections under 35 U.S.C. § 103(a) based on JP 2001-260549 in view of JP 11-189762.

Claim Rejections - 35 U.S.C. § 102

On page 3 of the Office Action, claim 1 is rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Barrera (U.S. Patent No. 5,965,256).

Initially, while not admitting that the rejection is appropriate, claim 1 has been amended. Applicants submit that Barrera does not disclose a curable composition containing a difunctional urethane (meth) acrylate having a weight average molecular weight of 5,000 to 20,000, and the content of the difunctional urethane (meth) acrylate is 80 or more percent by mass to the total amount of the difunctional urethane (meth) acrylate and other polymerizable compounds, as required by present claim 1, and thus the present invention is not anticipated for at least this reason.

Applicants' additional comments regarding the rejection are as follows.

First, Applicants disagree with the allegation in the Office Action that the disclosure of Barrera reads on Applicants' "claim [pressure sensitive adhesive] sheet having a structure and composition of hard coat layer/urethane (meth)acrylate/PSA layer." Specifically, the abstract of Barrera provides that:

> The substrate can be a cured adhesive, preferably a cured pressure-sensitive adhesive (PSA), in which case the fluoro-containing polymer layer is typically situated between the PSA layer and the IPN layer.

According to the above disclosure, when the multi-layer film of Barrera contains a pressure-sensitive adhesive, the order of the multi-layer film is different from Applicants' pressure sensitive adhesive sheet of claim 1, which contains a specific limitation that the pressure sensitive adhesive layer, the cured urethane (meth) acrylate layer and the hard coat layer are laminated in order. Thus, Applicants submit that the multi-layer film of Barrera has the fluoro-containing polymer layer (or the hard coat layer, as alleged by the Examiner) sandwiched between the PSA layer and the IPN layer, which is different from Applicants' pressure sensitive adhesive sheet, which has the cured urethane (meth) acrylate layer sandwiched between the pressure sensitive adhesive layer and the hard coat layer.

Second, Applicants disagree with the allegation in the Office Action that the fluoro-containing polymer layer of Barrera is equivalent to Applicants' hard coat layer. Applicants respectfully direct attention to page 9 of the specification, which discloses that the hard coat layer is composed of the cured substance of the hard coat agent which includes:

> unsaturated monomer, oligomer, resin or compositions thereof which is ultraviolet curable hard coat agent which can be cured by irradiation of ultraviolet ray. The examples include polyfunctional ultraviolet curable acrylic compounds having three or more functional groups such as acrylates, urethane acrylates and polyester acrylates. Preferable examples include trimethylol ethane tri(meth)acrylate, trimethylol propane tri(meth)acrylate, pentaerythritol tri (meth)acrylate, pentaerythritol tetra(meth)acrylate, dipentaerythritol penta(meth)acrylate, dipentaerythritol hexa(meth)acrylate, glycerol tri(meth) acrylate and triallyl(meth)acrylate.

Applicants submit that the hard coat layer does not contain a fluoro polymer and as such, is different from Barrera's fluoro-containing polymer layer. In particular, Barrera does not teach or suggest the hard coat layer of new claim 9.

Additionally, Applicants submit that in Barrera, superior bending resistance property, superior transparency, excellent scratch resistance, reduced distortion, and an improved definition of an image of the effects of the present invention are not described.

Withdrawal of the rejection is respectfully requested.

Claim Rejections - 35 U.S.C. §§ 102/103

On page 4 of the Office Action, claims 2 and 7 are rejected under 35 U.S.C. § 102(b) as allegedly anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as allegedly obvious over Barrera.

Applicants submit that claim 2 has been canceled rendering the rejection moot for the claim. Further, Applicants submit that present claim 1 is patentable over Barrera as discussed above, and accordingly, claim 7 is at least patentable over Barrera by virtue of its dependency from claim 1.

Withdrawal of the rejection is respectfully requested.

Claim Rejections - 35 U.S.C. § 103

A. On page 6 of the Office Action, claims 2, 3, and 7 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Barrera as applied to claim 1 above, and further in view of Mori (JP 11-189762).

Initially, Applicants submit that claim 2 has been canceled rendering the rejection moot for the claim.

Applicants comments are as follows.

First, Applicants submit that Mori does not make up for the deficiencies of Barrera with regard to the hard coat layer not containing a fluoro polymer and with regard to the pressure sensitive adhesive sheet, which has the cured urethane (meth) acrylate layer sandwiched between

the pressure sensitive adhesive layer and the hard coat layer as discussed above, so the combination of the cited references does not teach, suggest or otherwise render obvious the invention of claim 1, as well as the invention of claims 3 and 7 by virtue of their dependency from claim 1.

Next, Applicants submit that Mori discloses a substrate for an adhesive sheet comprising a cured film of the resin composition containing urethane acrylate and a reactive diluent. However, Mori does not disclose a formation of the hard coat layer. Accordingly, Mori does not disclose the visual definition of an image as optical property. Also, Mori does not disclose the bending resistance property.

Applicants also respectfully point out that the average molecular weight of the urethane acrylate disclosed on page 4, paragraph [0006] of Mori is actually between 1,000 to 100,000, not 1,000 to 10,000 as indicated in the Office Action. Further, Applicants respectfully point out that the average molecular weight of the urethane acrylate (A) of 1,000 to 10,000, as recited in claim 3 of the Examiner's translation of Mori and disclosed on page 4, paragraph [0004] of the Examiner's translation of Mori is a translational error. Applicants submit that paragraph [0004] of the Japanese publication of Mori discloses that the weight average molecular weight of the urethane (meth) acrylate is from 1,000 to 100,000. Applicants submit the Japanese publication of JP 11-189762 identifying the average molecular weights of the urethane (meth) acrylate at paragraphs [0004] and [0006] for the Examiner's convenience. Accordingly, Mori discloses that the weight average molecular weight of the urethane (meth) acrylate is from 1,000 to 100,000.

Next, Applicants respectfully direct attention to synthesis Examples 1-4 of Mori. In synthesis Example 1 (paragraph [0030]) of Mori, the difunctional urethane acrylate (A-1) is prepared by reacting a polyether polyol (P-2010 manufactured by Kuraray, hydroxyl value 55

mgKOH/g) and tolylenediisocyanate. Applicants submit that the Product Safety Data Sheet of P-2010 of Kuraray describes that the polyester polyol of P-2010 is a polyester obtained by condensation polymerizing 3-methyl-1,5-penntanndiol and adipic acid, and the number average molecular weight of the polyester polyol of P-2010 is 2,000. Accordingly, the number average molecular weight of urethane acrylate (A-1) is about 2,350. The number 2,350 is the number average molecular weight, but is not the weight average molecular weight. However, in a liner polymer having relatively lower molecular weight around 1,000 or 2,000, the weight average molecular weight is not larger than two times of the number average molecular weight. Accordingly, the weight average molecular weight of urethane acrylate (A-1) is not from 5,000 to 20,000.

In synthesis Example 2 (paragraph [0031]) of Mori, the difunctional urethane acrylate (A-2) is prepared by reacting a polyester polyol (P-2010 manufactured by Kuraray, hydroxyl value: 55 mgKOH/g) and isophoronediisocyanate. The number average molecular weight of urethane acrylate (A-2) is about 2,350. Accordingly, the weight average molecular weight of urethane acrylate (A-1) is not from 5,000 to 20,000.

In synthesis Example 3 (paragraph [0032]) of Mori, the difunctional urethane acrylate (A-3) is prepared by reacting a polyether polyol (PPG-1000 manufactured by Asahi Glass, hydroxyl value: 110 mgKOH/g) and hexamethylenediisocyanate. Applicants submit that JP 2008-133459 A at paragraph [0030] discloses that the polyether polyol of PPG-1000 is a polytetramethylene glycol and the molecular weight of the polyether polyol of PPG-1000 is 1,000. Accordingly, the molecular weight of urethane acrylate (A-3) is about 1,340. The weight average molecular weight of urethane acrylate (A-3) is not from 5,000 to 20,000. For the

Examiner's reference, Japanese publication JP 2008-133459 A and an English translation thereof are attached.

In synthesis Example 4 (paragraph [0033]) of Mori, the difunctional urethane acrylate (A-4) is prepared by reacting a polyether polyol (PTG-1000 manufactured by Hodogaya Chemical, hydroxyl value: 110 mgKOH/g) and tolylenediisocyanate. The molecular weight of the polyether polyol (PTG-1000 manufactured by Hodogaya Chemical, hydroxyl value: 110 mgKOH/g) is 1,000. Paragraph [0009] of JP 3940476 B2 discloses that the polyether polyol of PTG-1000 is a polypropylene diol and the molecular weight of the polyether polyol of PTG-1000 is 1,000. Accordingly, the molecular weight of urethane acrylate (A-4) is about 1,350. The weight average molecular weight of urethane acrylate (A-4) is not from 5,000 to 20,000. For the Examiner's reference, Japanese Patent JP 3940476 B2 (Publication No. 11-080304) and an English translation thereof are attached.

In the synthesis Examples of Mori, the other urethane acrylates are not described.

Accordingly, Applicants submit that Mori does not disclose that the difunctional urethane (meth) acrylate has a weight average molecular weight of 5,000 to 20,000.

On the other hand, in the present invention of claim 1, by using the difunctional urethane (meth) acrylate having a weight average molecular weight of narrow range of 5,000 to 20,000, the superior effects described above are exerted. That is, the pressure sensitive adhesive sheets of the present invention are superior in bending resistance property and superior transparency, and can give excellent scratch resistance, can be reduced in distortion, and can achieve an improved definition of an image. Accordingly, Applicants submit that the present invention of claim 1 is unobvious over the combination of Barrera and Mori, and that claims 3 and 7 are at

least patentable over the combination of Barrera and Mori by virtue of their dependency from claim 1.

Withdrawal of the rejection is respectfully requested.

B. On page 7 of the Office Action, claim 4 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Barrera in view of Onozawa et al. (U.S. Patent No. 6,103,370).

Applicants submit that Onozawa et al. do not make up for the deficiencies of Barrera with regard to the hard coat layer not containing a fluoro polymer and with regard to the pressure sensitive adhesive sheet, which has the cured urethane (meth) acrylate layer sandwiched between the pressure sensitive adhesive layer and the hard coat layer, as discussed, above so the combination of the cited references does not teach, suggest or otherwise render obvious the invention of claim 1, as well as the invention of claim 4 by virtue of its dependency from claim 1.

Withdrawal of the rejection is respectfully requested.

C. On page 8 of the Office Action, claim 6 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Barrera, as evidenced by Furuya et al. (U.S. Patent No. 6,150,026).

Applicants submit that Furuya et al. do not make up for the deficiencies of Barrera with regard to the hard coat layer not containing a fluoro polymer and with regard to the pressure sensitive adhesive sheet, which has the cured urethane (meth) acrylate layer sandwiched between the pressure sensitive adhesive layer and the hard coat layer, as discussed above, so the combination of the cited references does not teach, suggest or otherwise render obvious the invention of claim 1, as well as the invention of claim 6 by virtue of its dependency from claim 1.

Withdrawal of the rejection is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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